

SUMMARY OF THE RELATIONSHIP BETWEEN THE DOMINANT ISSUES AND THE EXPERTISE NEEDED  
FOR THE JACKPILE-PAGUATE ENVIRONMENTAL IMPACT STATEMENT

RADIOLOGICAL

<u>ISSUE</u>	<u>RELATIVE SIGNIFICANCE</u>	<u>EXPERTISE NEEDED</u>	<u>POTENTIAL SOURCE OF EXPERTISE</u>
The release of radon and gamma radiation into the ambient atmosphere from waste piles, in situ ore, ore storage areas, ore spilled along the rail spur line, protore stockpiles, and the entire site.	S	Physicist/Meteorologist Computer Specialist	EPA/NRC Contract
Radiological cleanup of existing buildings and houses on the mine site for future use.	S	Physicist	EPA/NRC Contract
Radiological contamination of the Rio Paguete and Rio Moquino and Quirk Reservoir (past and future).	S	Physicist/Hydrologist	EPA/NRC Contract
Radiological contamination of the ground water by the leaching of the waste piles, protore backfill, and underground mining areas.	S	Physicist/Hydrologist	EPA/NRC Contract
Radiological contamination of the soil-vegetation-livestock (wildlife)-human food chain.	S	Physicist	EPA/NRC Contract
Cumulative radiation doses and health impacts from all exposure pathways for the immediate site and surrounding areas.	S	Physicist	EPA/NRC Contract
The establishment of standards against which reclamation success will be judged.	S	Physicist/Environmental Scientist	EPA/NRC SCR/CD
The establishment of long term monitoring needs and procedures.	S	Physicist/Environmental Scientist	EPA/NRC SCR/CD
The development of alternatives.	S	Environmental Scientist Task Force	SCR/CD

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NON-RADIOLOGICAL

<u>ISSUE</u>	<u>RELATIVE SIGNIFICANCE</u>	<u>EXPERTISE NEEDED</u>	<u>POTENTIAL SOURCE OF EXPERTISE</u>
Potential loss of reserves due to the burial of protore stockpiles.	RS	Economic Geologist/Mining Engineer	SCR/CD
Potential loss of in situ reserves due to backfilling and sloping of highwalls.	RS	Economic Geologist/Mining Engineer	SCR/CD
Proper abandonment of shafts, declines, and vent holes.	RS	Mining Engineer	SCR/CD
Stabilization, fencing, and sloping of highwalls for the prevention of rockfalls, landslides, water-caused erosion, and human safety.	RS	Engineering Geologist	GD
Stabilization of waste pile slopes by sloping, benching, and berming.	S	Engineering Geologist	GD
Stabilization of Rio Paguete and Rio Moquino stream channels and floodplains.	RS	Environmental Geologist	SCR/CD
Contouring of the entire site for the prevention of water erosion.	RS	Environmental Geologist/Reclamation Specialist	SCR/CD
Siltation of Quirk Reservoir.	RS	Chemist/Hydrologist	WRD
Contamination of the Rio Paguete and Rio Moquino with suspended particulates, dissolved solids, and heavy metals.	RS	Chemist/Hydrologist	WRD
Contamination of ponded water within the site, and within the blocked drainages.	IS	Chemist/Hydrologist	WRD
Contamination of ground water by the leaching of the tailings piles and backfill.	RS	Chemist/Ground water Hydrologist	WRD
Ground water recharge.	IS	Ground Water Hydrologist	WRD
Dispersion of wind-blown particulates	RS	Meteorologist	EPA
Construction of a productive soil profile (thickness, toxicity, etc.).	S	Reclamation Specialist/Soil Scientist/Chemist	SCS
Selection of productive revegetation species (abundance, diversity, survival rate, etc.).	S	Range Management Specialist	BIA
Grazing management plan.	RS	Range Management Specialist	BIA
Concentration of toxic elements in the revegetation species.	RS	Range Management Specialist	BIA

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NON-RADIOLOGICAL (Continued)

<u>ISSUE</u>	<u>RELATIVE SIGNIFICANCE</u>	<u>EXPERTISE NEEDED</u>	<u>POTENTIAL SOURCE OF EXPERTISE</u>
Wildlife habitat establishment.	IS	Environmental Scientist/ *Biologist	SCR/CD
Endangered species.	IS	Environmental Scientist/ *Biologist	SCR/CD
esthetic impacts of landform modification (color, slope, consistency, vegetation, etc., of highwalls and waste piles).	RS	Environmental Scientist/ Environmental Geologist	SCR/CD
Future land use (grazing, agriculture, wildlife habitat, home construction, storage and office space, recreation, manufacturing complex).	S	Environmental Scientist	SCR/CD
Reclamation employment (percent Laguna)	RS	Sociologist	BIA Contract
Population flux due to reclamation (non-Laguna influx, impact on social services, etc.)	IS	Sociologist	BIA Contract
Personnel retraining possibilities.	IS	Sociologist	BIA Contract
Re-routing of Highway 279 through the pit.	RS	Environmental Scientist	SCR/CD
Impact of the removal of the rail spur line on future economics of mining and other land uses.	RS	Mining Engineer	SCR/CD
Estimated financial cost of reclamation.	RS	Economist/Mining Engineer	Contract
Cultural resources.	IS	Environmental Scientist/*Archeologist	SCR/CD
Establishment of standards against which reclamation will be judged.	S	Environmental Scientist Task Force	SCR/CD
Establishment of future monitoring needs and procedures.	S	Environmental Scientist Task Force	SCR/CD
The development of alternatives.	S	Environmental Scientist Task Force	SCR/CD

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<u>ISSUE</u>	<u>RELATIVE SIGNIFICANCE</u>	<u>EXPERTISE REQUIRED</u>	<u>POTENTIAL SOURCE OF EXPERTISE</u>
The inter-relationships of all alternatives.	S	Environmental Scientist Task Force	SCR/CD

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LEGEND:

Abbreviations: S - Significant Issue  
RS - Relatively Significant Issue  
IS - Insignificant Issue

\*These expertise would be useful, but are not essential.

Acronyms:

BIA - Bureau of Indian Affairs  
CD - Conservation Division, U. S. Geological Survey  
EPA - Environmental Protection Agency  
GD - Geologic Division, U. S. Geological Survey  
NRC - Nuclear Regulatory Commission  
S. CD - South Central Region, Conservation Division, U. S. Geological Survey  
SCS - Soil Conservation Services  
WRD - Water Resources Division, U. S. Geological Survey

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